

APPENDIX V AIRPORT PLANS AND CONSTRUCTION

AIRPORT LAYOUT PLAN

This Appendix represents the compilation of the conceptual development for the Ravalli County Airport. It includes the design criteria, preliminary cost estimate, and then proceeds to the actual airport drawings. The Purpose and Need section defines the reasoning behind important features of the Airport Layout Plan (ALP).

The ALP drawings are the graphic representation, to scale, of the existing and preferred alternative, airport facilities located on the airport, and pertinent clearance and dimensional information necessary to show compliance with the applicable design standards. This package includes the following drawings:

- Airport Layout Plan
- Airport Air Space
- Airport Approach/Runway Protection Zone
- Future Terminal and Hangar Configuration
- Land Use Plan
- Airport Property Map – Exhibit “A”

The Ravalli County ALP depicts the existing facilities as well as those facilities recommended to accommodate the forecast demand. The ALP also contains an all-weather wind rose, runway data tables, infrastructure inventory legend, and sponsor / FAA approval signatures.

The forecasted usage of the airport by the critical design aircraft indicated a need to increase the separation between the runway and taxiway to provide additional clearances.

The proposed changes to the airfield are shown on the ALP and have been time-staged to conform to two planning periods.

- Phase I Development, 2010-2017
- Ultimate Development, 2018-2030

Within these two planning periods, is a series of phases/priorities of improvements. The purpose of the ALP is to clearly identify existing and proposed facilities and/or development.

The approved ALP was developed using Alternative 4 from this Environmental Assessment as a basis. The ALP set will need to be updated to reflect the preferred alternative, Alternative 2A, as a basis.

Table V-1 depicts FAA design standards as they apply to Ravalli County Airport.

TABLE V-1: Airport Design Airplane and Airport Data

Item	Criteria
AIRCRAFT APPROACH CATEGORY	B
AIRPLANE DESIGN GROUP	II (>12,500 pounds)
Airplane wingspan.....	78.99 feet
Primary runway end is non-precision instrument	> 1-statute mile
Other runway end is.....	visual
Airplane undercarriage width (1.15 x main gear track).....	19.17 feet
<u>AIRPORT AND RUNWAY DATA</u>	
Airport elevation	3644 feet
Mean daily maximum temperature of the hottest month	84.00 F.
Maximum difference in runway centerline elevation	38 feet
Length of haul for airplanes of more than 60,000 pounds	500 miles
Wet and slippery runways	
<u>RUNWAY LENGTHS RECOMMENDED FOR AIRPORT DESIGN</u>	
Small airplanes with approach speeds of less than 30 knots	410 feet
Small airplanes with approach speeds of less than 50 knots	1090 feet
Small airplanes with less than 10 passenger seats	
75 percent of these small airplanes	3770 feet
95 percent of these small airplanes	4800 feet
100 percent of these small airplanes	5170 feet
Small airplanes with 10 or more passenger seats	5170 feet
Large airplanes of 60,000 pounds or less	
75 percent of these large airplanes at 60 percent useful load	6190 feet
75 percent of these large airplanes at 90 percent useful load	8800 feet
100 percent of these large airplanes at 60 percent useful load ...	7680 feet
100 percent of these large airplanes at 90 percent useful load ...	9490 feet
Airplanes of more than 60,000 pounds	Approximately 6290 feet
REFERENCE: Chapter 2 of AC 150/5325-4B, Runway Length Requirements for Airport Design, no Changes included.	

RUNWAY AND TAXIWAY WIDTH AND CLEARANCE STANDARD DIMENSIONS

Runway centerline to parallel taxiway/taxilane centerline.....	240 feet
Runway centerline to edge of aircraft parking.....	250 feet
Taxiway centerline to parallel taxiway/taxilane centerline.....	105 feet
Taxiway centerline to fixed or movable object.....	65.5 feet
Taxiway centerline to parallel taxilane centerline	97 feet
Taxilane centerline to fixed or movable object	57.5 feet

Runway protection zone at the primary runway end:

Length.....	1000 feet
Width 200 feet from runway end	500 feet
Width 1200 feet from runway end	700 feet

Runway protection zone at other runway end:

Length.....	1000 feet
Width 200 feet from runway end	500 feet
Width 1200 feet from runway end	700 feet
Runway obstacle free zone (OFZ) width	400 feet
Runway obstacle free zone length beyond each runway end	200 feet
Runway width.....	75 feet
Runway shoulder width	10 feet
Runway safety area width	150 feet
Runway safety area length beyond each runway end or stopway end, whichever is greater.....	300 feet
Runway object free area width	500 feet
Runway object free area length beyond each runway end or stopway end, whichever is greater.....	300 feet
Taxiway width.....	35 feet
Taxiway edge safety margin.....	7.5 feet
Taxiway shoulder width	10 feet
Taxiway safety area width	79 feet
Taxiway object free area width	131 feet
Taxilane object free area width	115 feet
Taxiway wingtip clearance	26 feet
Taxilane wingtip clearance	18 feet

REFERENCE: AC 150/5300-13, AIRPORT DESIGN.

Should an aircraft exceeding 17,000 lbs. maximum takeoff weight be based at Ravalli County Airport, pavement strength should be evaluated and strengthening of the pavement sections may be required. The types of aircraft and number of operations should be monitored by the Airport Manager and Airport Board. As indicated above, changes in the design aircraft will result in increased development of the airport facilities.

STAGE DEVELOPMENT

The recommended projects to be constructed each year are as indicated below. Costs are determined using 2009 construction costs without any adjustments for inflation.

Unless noted otherwise, proposed projects listed below are eligible for FAA funding at the time the ALP Narrative Report was submitted. Please note that, although the projects listed below are currently eligible for FAA funding, there is no guarantee that FAA funds will be available or that FAA will participate in the cost of any future developments.

TABLE V-2: Development & Cost Breakdown

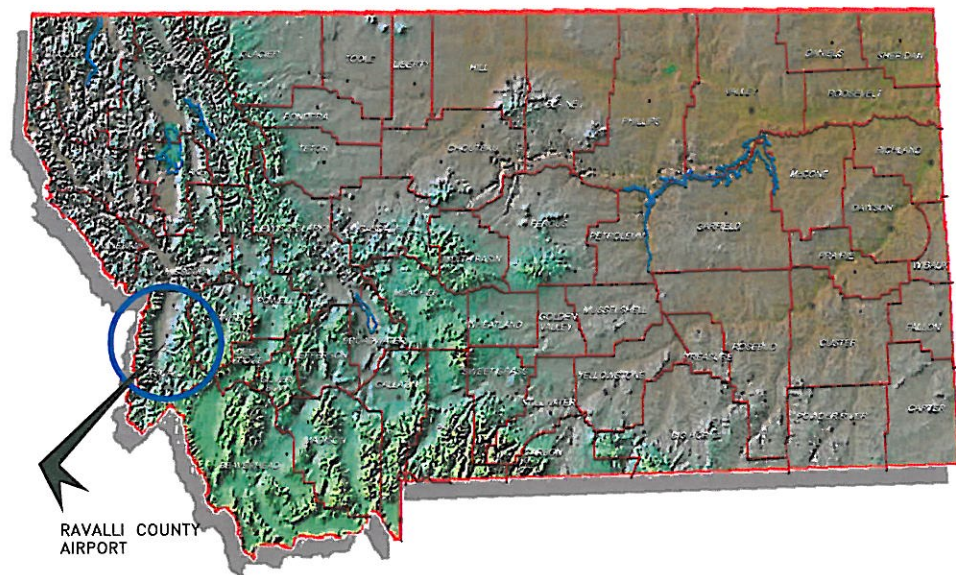
ESTIMATED COST ALTERNATIVE 2A:

Phase 1 (Construction to 4200 feet)

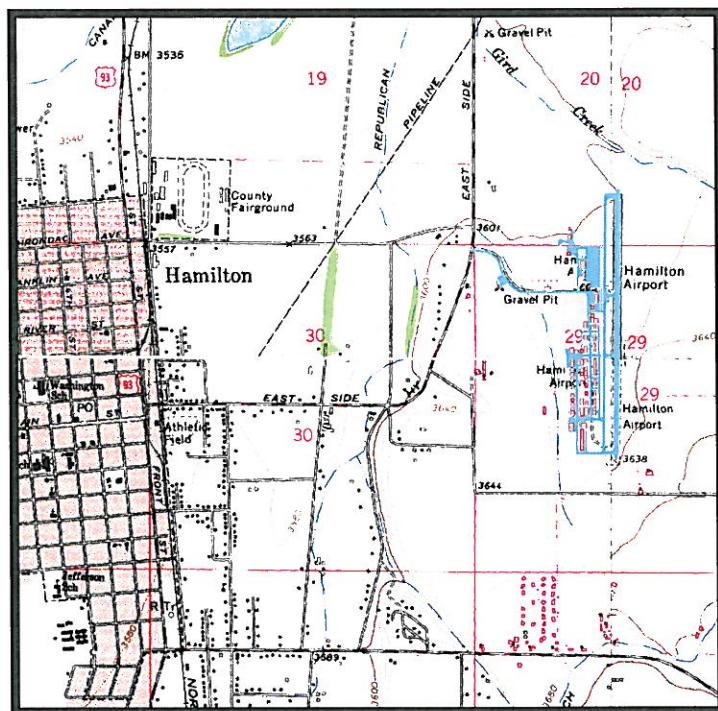
	Total Cost	FAA Grant (95%)	MAD Grant (2.5%)	Local Share (2.5%)
Runway Construction	\$2,736,000	\$2,599,200	\$68,400	\$68,400
Taxiway B Reconstruction	\$750,000	\$712,500	\$18,750	\$18,750
Taxiway B Extension	\$1,365,000	\$1,296,750	\$34,125	\$34,125
Land Acquisition (Safety)	\$ 870,000	\$826,500	\$21,750	\$21,750
Total	\$5,721,000	\$5,434,950	\$143,025	\$143,025
Opt. Land Acquisition (Noise Land Use Compatibility)	\$1,590,000	\$1,510,500	\$39,750	\$39,750

Phase 2 (Extension to Ultimate Length of 5200 feet)

	Total Cost	FAA Grant (95%)	MAD Grant (2.5%)	Local Share (2.5%)
Runway Construction	\$443,000	\$420,850	\$11,075	\$11,075
Taxiway Extension	\$300,000	\$285,000	\$7,500	\$7,500
Additional Land Acquisition (Safety)	\$300,000	\$285,000	\$7,500	\$7,500
Total	\$1,043,000	\$990,850	\$26,075	\$26,075



LOCATION MAP



VICINITY MAP



RAVALLI COUNTY AIRPORT AIRPORT LAYOUT PLANS

A.I.P. 3-30-0037-006-2005

PREPARED BY:
**MORRISON
MAIERLE, INC.**
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INDEX OF SHEETS

- 1/8 TITLE SHEET
- 2/8 AIRPORT LAYOUT PLAN
- 3/8 AIRSPACE DRAWING
- 4/8 RUNWAY PROTECTION ZONE (ULTIMATE)
- 5/8 TERMINAL AREA PLAN
- 6/8 TERMINAL AREA PLAN
- 7/8 LAND USE
- 8/8 AIRPORT PROPERTY MAP - EXHIBIT 'A'

VERIFICATION
THESE PRINTS MAY BE
REDUCED. LINE BELOW
MEASURES ONE INCH ON
ORIGINAL DRAWING.
MODIFY SCALE
ACCORDINGLY

SCOTT T.
BELL
8123 PE
REGISTERED PROFESSIONAL ENGINEER
MONTANA

REVISIONS
1 SRE AND TAXIWAY 11/06 KMD

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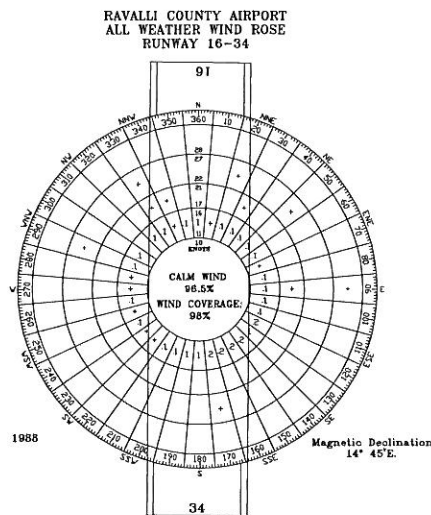
DRAWN BY: KMD
CHK'D BY: TJE
APPR. BY: STB
DATE: 11-06
BY: Q.A. REVIEW
DATE:

RAVALLI COUNTY AIRPORT
AIRPORT LAYOUT PLAN
MONTANA
HAMILTON
TITLE SHEET

PROJECT NO.
0877
SHEET NUMBER
1 OF 8
DRAWING NUMBER
1

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- NOTE:
- Noise contour data obtained in 2004.
 - All Weather Wind Rose per Carter-Burgess ALP 3-30-0037-03



THRESHOLD SITING SURFACE PENETRATIONS	
DESCRIPTION	DISPOSITION
NONE	

MODIFICATIONS TO FAA STANDARDS	
DESCRIPTION	DATE BY:
NONE	

OBSTRUCTION TABLE	
DESCRIPTION	DISPOSITION
NOTE: SEE AIRSPACE AND RPZ DRAWINGS FOR FURTHER DETAILS	

EXISTING NON-STANDARD CONDITIONS							
ITEM	AIRPLANE DESIGN GROUP		STANDARD		NON-STANDARD CONDITION		REMARKS
	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE	
RUNWAY-TAXIWAY SEPARATION	B-II	B-II	≥ 240'	≥ 204'	200'	NONE	TO BE RESOLVED BY SHIFTING THE RUNWAY TO THE EAST.

RUNWAY DATA			
	RUNWAY 16/34		
	EXISTING	PHASE I	ULTIMATE
EFFECTIVE / PRECENT GRADIENT IN %	0.91	0.70/1.30	0.63/1.30
RUNWAY (LENGTH / WIDTH)	4200' X 75'	4200' X 75'	5200' X 75'
USABLE RUNWAY LENGTH	4200'	4200'	5200'
APPROACH SURFACE (SLOPE)	20:1 / 20:1	34:1 / 34:1	34:1 / 34:1
INSTRUMENT RUNWAY / CATEGORY	VISUAL	NPI	NPI
MAXIMUM ELEVATION ABOVE MSL	3644.1	3638.0	3641.0
PAVEMENT DESIGN STRENGTH (ASPHALT)	17,000# SWL	17,000# SWL	17,000# SWL
RUNWAY LIGHTING	MIRL	MIRL	MIRL
RUNWAY MARKING	BASIC	NPI	NPI
VISUAL AIDS	VASI	PAPI-R/W 16 & 34	PAPI-R/W 16 & 34
RUNWAY SAFETY AREA (RSA) (L/W)	4800' X 150'	4800' X 150'	5800' X 150'
OBJECT FREE AREA (OFA) (L/W)	4800' X 500'	4800' X 500'	5800' X 500'
OBSTACLE FREE ZONE (OFZ) (L/W)	4600' X 250'	4600' X 400'	5600' X 400'
RUNWAY PROTECTION ZONE (RPZ) (L/W)	250'X450'X1000'	500'X700'X1000'	500'X700'X1000'
APPROACH VISIBILITY MIN.	VISUAL 3 MI.	NOT < 1 MI.	NOT < 1 MI.
AIRCRAFT SERVED	A & B	A & B	A, B, & C
AIRPORT REFERENCE CODE	B-II	B-II	B-II

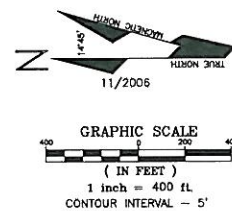
CONTROL POINTS			
NAME	NORTHING	EASTING	DESCRIPTION
CP1	24,670.57	40,837.82	3603.7 REBAR w/ CAP 200' NORTH OF R/W 16
CP2	20,051.09	40,777.68	3643.5 REBAR w/ CAP 200' SOUTH OF R/W 34.

RUNWAY END COORDINATES (NAD 83)			
RUNWAY	EXISTING	PHASE 1	ULTIMATE
16	LAT 46°15'26.1" LONG. 114°07'31.6"	LAT 46°15'31.5" LONG. 114°07'25.8"	LAT 46°15'41.4" LONG. 114°07'26.0"
34	LAT 46°14'44.7" LONG. 114°07'32.3"	LAT 46°14'50.1" LONG. 114°07'26.6"	LAT 46°14'50.1" LONG. 114°07'26.6"

AIRPORT DATA		
	EXISTING	ULTIMATE
AIRPORT ELEVATION	3644.1 (NAVD 88)	3641.0 (NAVD 88)
ARP COORDINATES (NAD 83)	LAT 46°15'05.4" LONG. 114°07'32.0"	LAT 46°15'10.8" LONG. 114°07'26.2"
MEAN MAX TEMP	84° F	84° F
NPIAS ROLE	GENERAL AVIATION	GENERAL AVIATION
AIRPORT REFERENCE CODE (ARC)	B-II	B-II
WIND COVERAGE 12 MPH	98%	98%
DESIGN AIRCRAFT / AIRPORT REFERENCE CODE	CATEGORY B GROUP II	CATEGORY B GROUP II

TAXIWAY DATA											
	T/W A		T/W B		T/W A1		T/W A2		T/W A3	T/W A4	T/W A5
	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING	ULTIMATE	EXISTING
WIDTH	R/W 16-34	50'	30'	35'	35'	35'	35'	35'	35'	35'	35'
T/W DESIGN GROUP	R/W 16-34	B-II	B-II SMALL	B-II	B-II	B-II	B-II	B-II	B-II	B-II	B-II
PAVEMENT STRENGTH	R/W 16-34	17K SWL	17K SWL	17K SWL	17K SWL	17K SWL	17K SWL	17K SWL	17K SWL	17K SWL	17K SWL

NOTE:
PARALLEL TAXIWAY SYSTEM TAXIWAYS ARE LIGHTED WITH MEDIUM INTENSITY LIGHTS.



LEGEND	
	EXISTING FUTURE
PAVEMENT	
BUILDING	
BUILDING AFTER RW RELOCATION	
FENCE	
GRAVEL	
AIRPORT BOUNDARY	
ADJACENT PROPERTY	
OFA (OBJECT FREE AREA)	
OFZ (OBSTACLE FREE ZONE)	
RPZ (RUNWAY PROTECTION ZONE)	
RSA (RUNWAY SAFETY AREA)	
BRL (BUILDING RESTRICTION LINE)	
IRRIGATION DITCH / CREEKS	
WETLANDS	
CONTROL POINT	
AIRPORT REFERENCE POINT	

CONDITIONALLY APPROVED
Subject to comments of our letter dated 4/20/07
Scott T. Scott 4-20-07
Airports District Office
Federal Aviation Administration
Airspace Approval Date: 3-12-08
Airspace Case No. 2-003-AMM-54-NFA

SPONSOR APPROVAL
RAVALLI COUNTY AIRPORT
Robert A. Clark
RAVALLI COUNTY COMMISSION
4-16-07
DATE

VERIFY SCALE!
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ORIGINAL DRAWING

SCOTT T. SCOTT
8133 PE
PROFESSIONAL
REGISTERED

REVISIONS		NO.	DESCRIPTION	DATE	BY
1	SRE AND TAXIWAY	11/06 KMD			

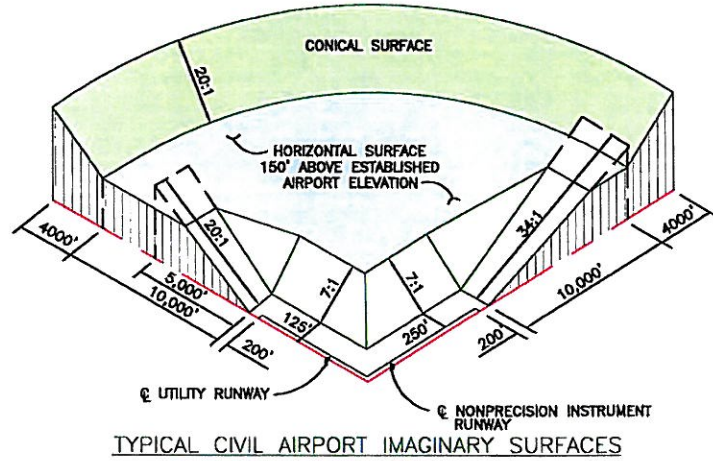
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APPR. BY: STB
DATE: 11-06
BY: Q.A. REVIEW
DATE:

RAVALLI COUNTY AIRPORT
AIRPORT LAYOUT PLAN
MONTANA
HAMILTON
AIRPORT LAYOUT PLAN

PROJECT NO
0877
SHEET NUMBER
2 OF 8
DRAWING NUMBER

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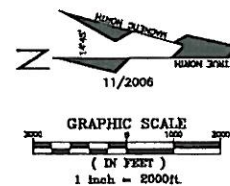
LEGEND

PRIMARY SURFACE

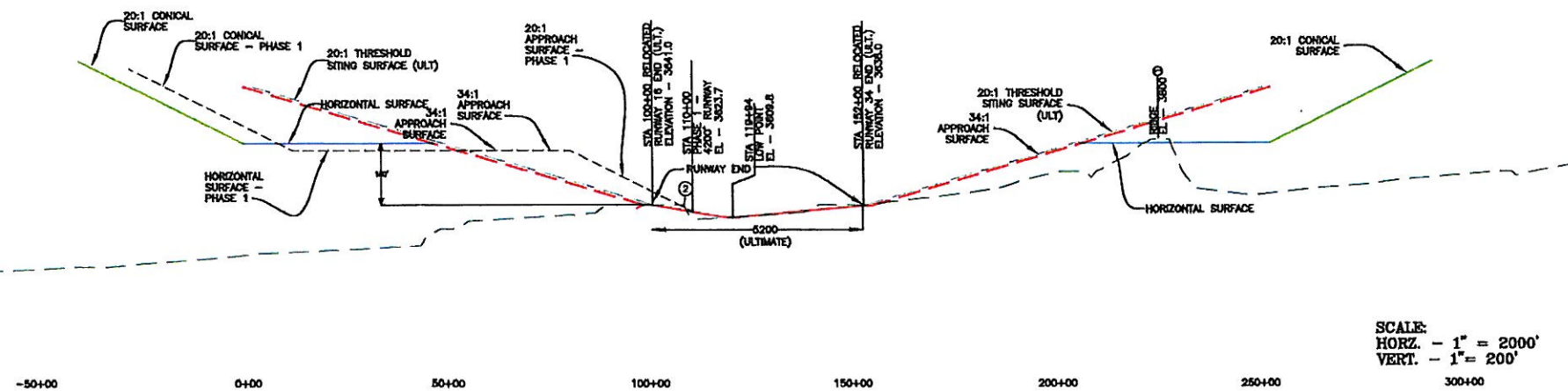
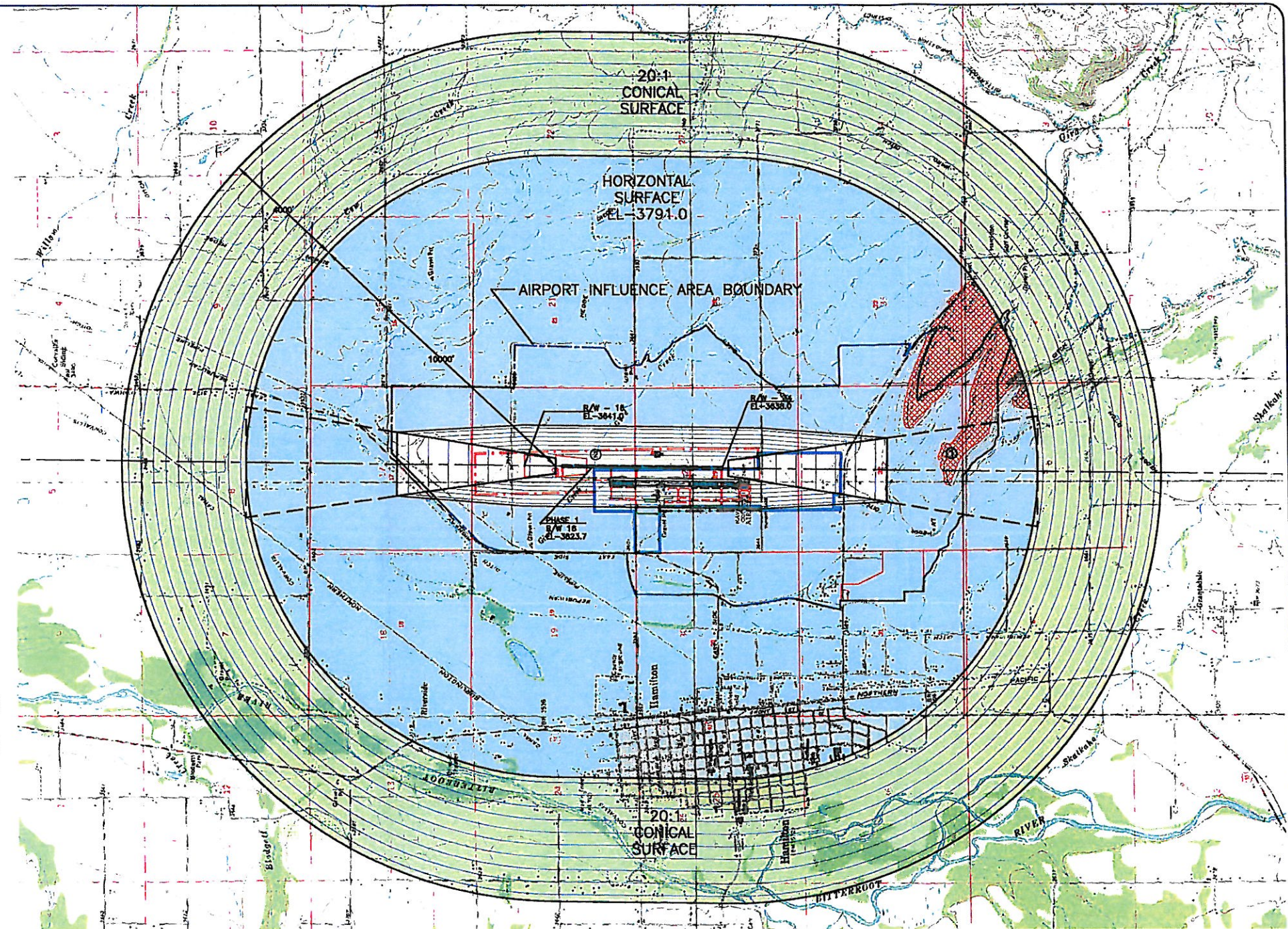
- 7:1 TRANSITION SURFACE
- 34:1 APPROACH SURFACE (BELOW HORIZONTAL SURFACE)
- 34:1 APPROACH SURFACE (ABOVE HORIZONTAL SURFACE)
- HORIZONTAL SURFACE
- 20:1 CONICAL SURFACE
- AIRPORT BOUNDARY
- FUTURE AIRPORT BOUNDARY
- AIRPORT INFLUENCE AREA BOUNDARY
(CURRENTLY UNDER REVIEW FOR HEIGHT, SLOPE & NOISE.)
- OBSTRUCTION

OBSTRUCTION TABLE	
DESCRIPTION	DISPOSITION
① TERRAIN (ULTIMATE PART 77)	NO ACTION
② TERRAIN (ULTIMATE PART 77)	REMOVE WITH FUTURE PROJECT

NOTE:
1. OBSTRUCTION TABLE BASED ON EXISTING RUNWAY AS A VISUAL RUNWAY. NUMEROUS OBSTRUCTIONS IF EXISTING RUNWAY UPGRADED TO NPI.
2. EXISTING RUNWAY AND APPROACH SURFACES NOT SHOWN FOR CLARITY. SEE INNER APPROACH DRAWING FOR DETAILS.



4250
4200
4150
4100
4050
4000
3950
3900
3850
3800
3750
3700
3650
3600
3550
3500
3450
3400
3350
3300
3250



SCALE:
HORZ. - 1" = 2000'
VERT. - 1" = 200'

VERTICAL SCALE
THESE PRINTS MAY BE
REDUCED OR ENLARGED
FOR CONSTRUCTION
ORIGINAL DRAWING.
HORIZONTAL SCALE
AS SHOWN

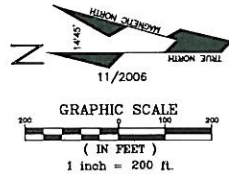
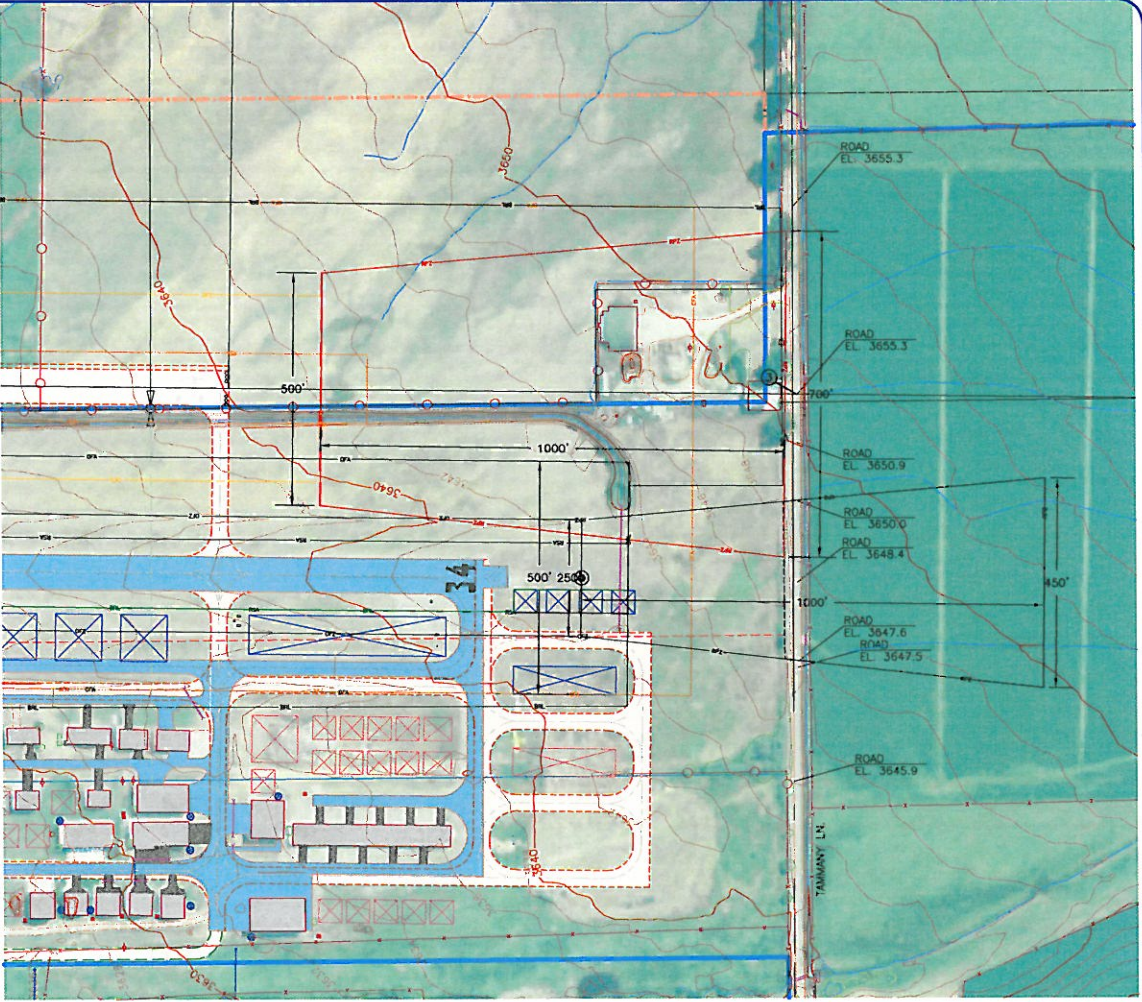
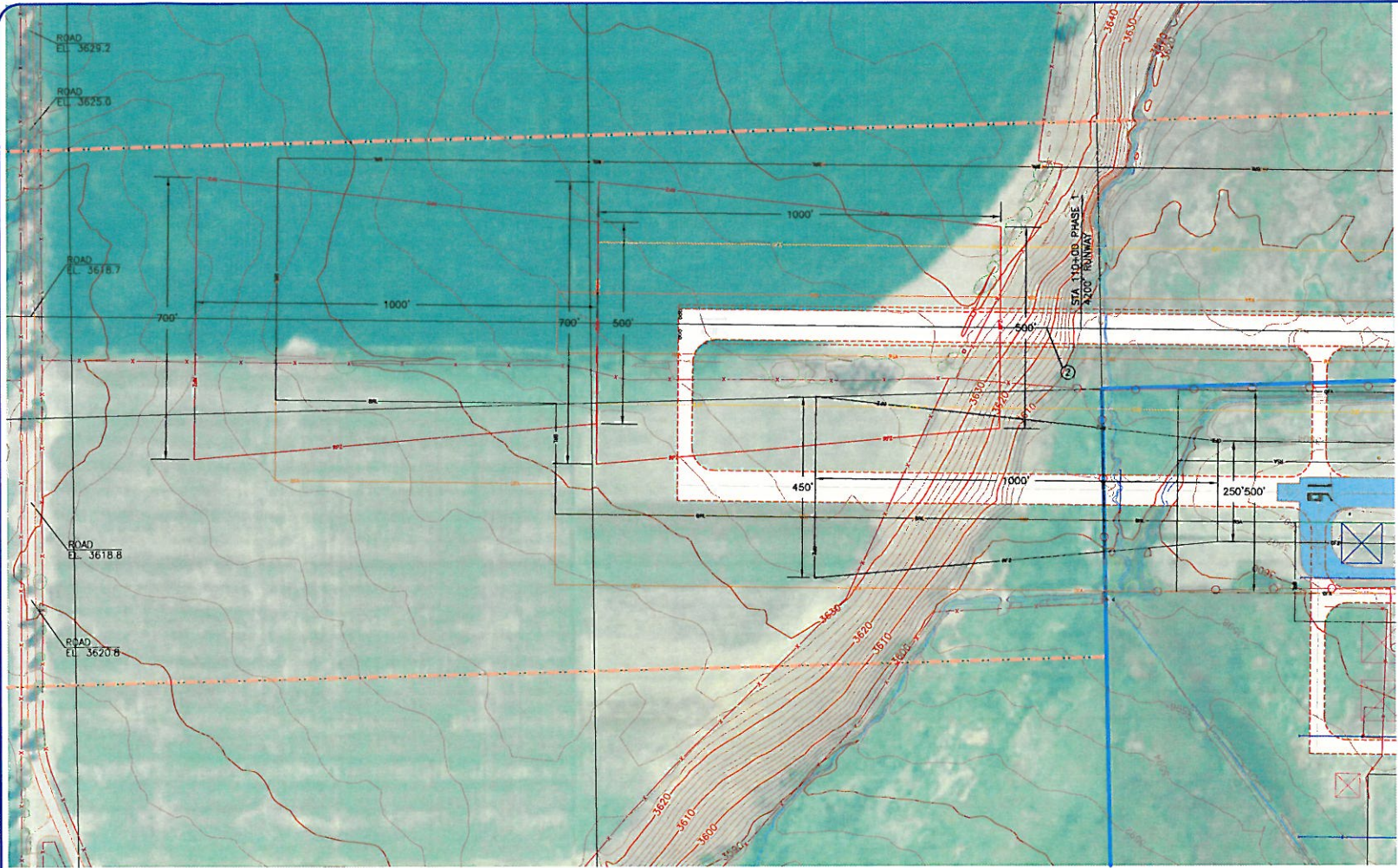


REVISIONS	DATE	DESCRIPTION
1	11/06/06	SRE AND TAXIWAY

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APP'D BY: STB	DATE: 11-08
BY: O.A. REVIEW	DATE:

RAVALLI COUNTY AIRPORT
AIRPORT LAYOUT PLAN
MONTANA
HAMILTON
PROJECT NO. 0877
SHEET NUMBER 3 OF 8
DRAWING NUMBER 3
AIRSPACE DRAWING
RELOCATED RUNWAY 16 - 34

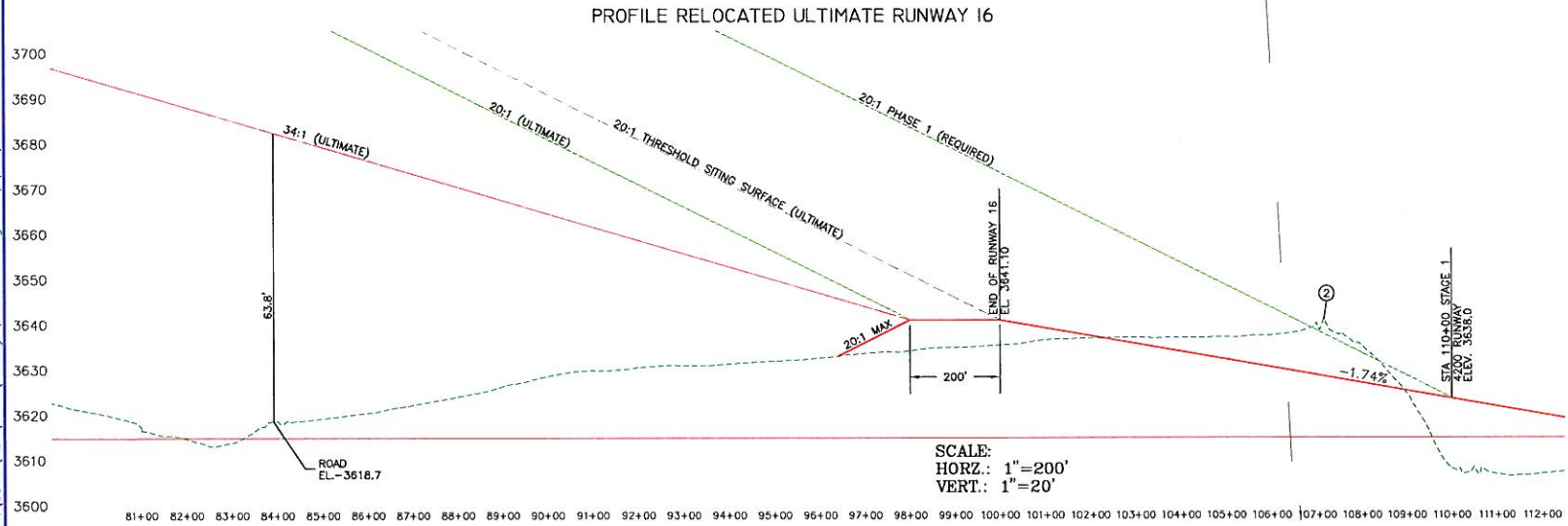


OBSTRUCTION TABLE			
OBSTRUCTION NUMBER	DESCRIPTION	AMOUNT OF PENETRATION	PROPOSED DISPOSITION
2	EXISTING GROUND	12.6'	REMOVE WITH FUTURE PROJECT
3	ROAD SOUTH OF RW 34 AT +15' IS OBSTRUCTION AT ULTIMATE.	2.9'	RELOCATE/RECONSTRUCT

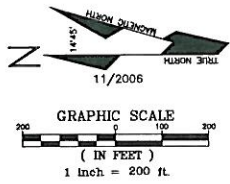
NOTE:
OBSTRUCTION TABLE BASED ON ULTIMATE RUNWAY. EXISTING GROUND AT APPROACH ENDS OF THE ULTIMATE RUNWAY TO BE ADDRESSED DURING THAT CONSTRUCTION.

LEGEND	
	EXISTING FUTURE
PAVEMENT	
BUILDING	
BUILDING AFTER RW RELOCATION	
FENCE	
GRAVEL	
AIRPORT BOUNDARY	
ADJACENT PROPERTY	
OFA (OBJECT FREE AREA)	
OFA (OBSTACLE FREE ZONE)	
RPZ (RUNWAY PROTECTION ZONE)	
RSA (RUNWAY SAFETY AREA)	
BRL (BUILDING RESTRICTION LINE)	
IRRIGATION DITCH / CREEKS	
WETLANDS	
CONTROL POINT	
AIRPORT REFERENCE POINT	

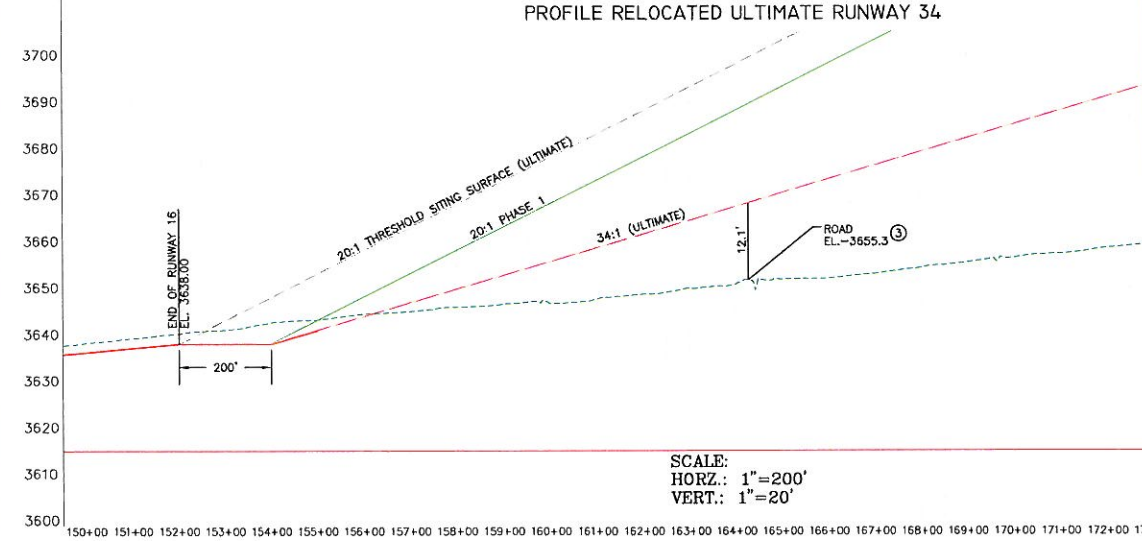
PROFILE RELOCATED ULTIMATE RUNWAY 16



SCALE:
HORZ.: 1"=200'
VERT.: 1"=20'



PROFILE RELOCATED ULTIMATE RUNWAY 34



SCALE:
HORZ.: 1"=200'
VERT.: 1"=20'

VERIFY SCALE!
THESE PRINTS MAY BE
REDUCED. LINE BELOW
MEASURES ONE INCH ON
ORIGINAL DRAWING.



REVISIONS		DATE	BY
1	SRE AND TAXIWAY	11/06 KMD	

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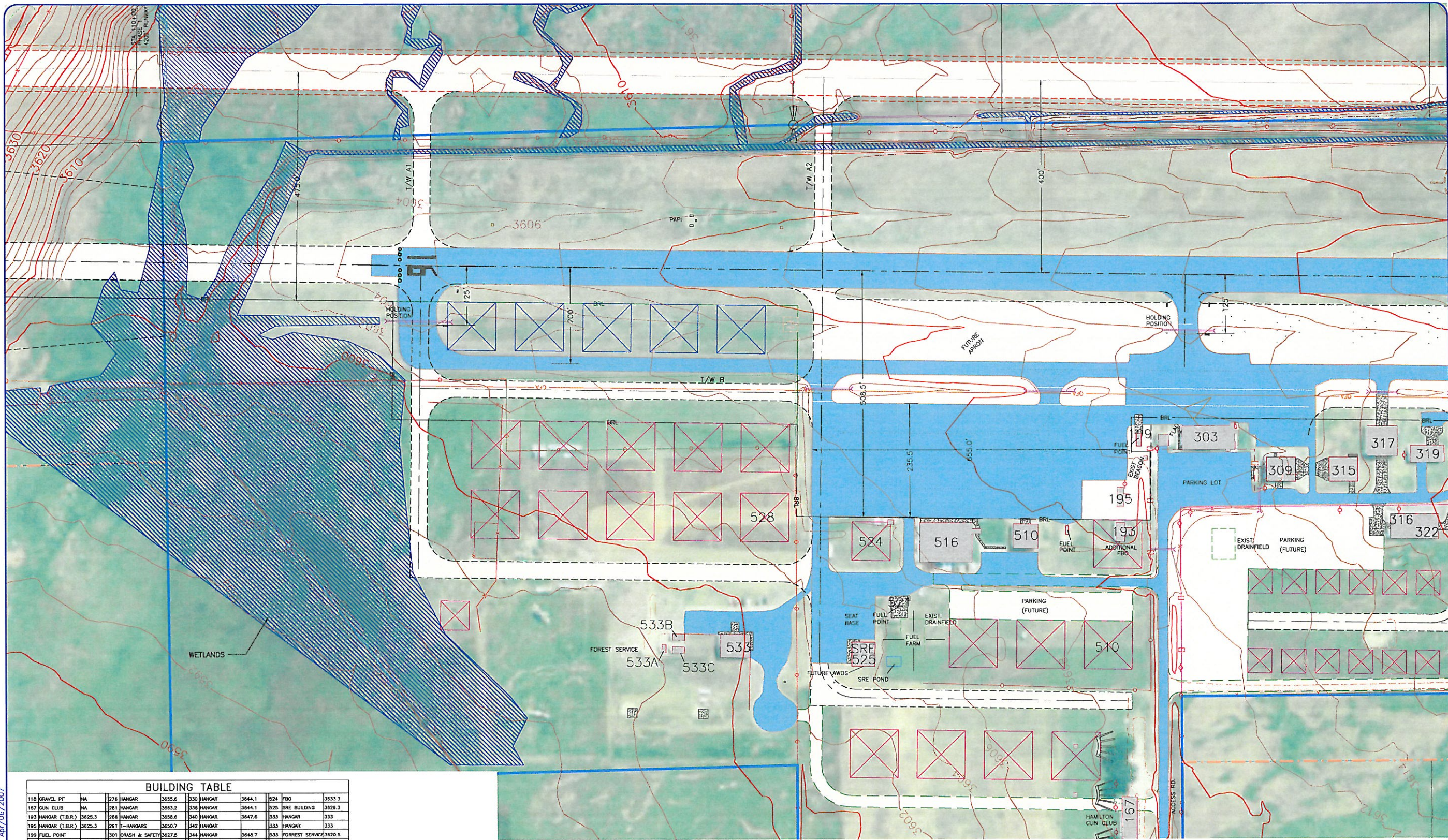
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RAVALLI COUNTY AIRPORT
AIRPORT LAYOUT PLAN
HAMILTON MONTANA

RUNWAY 16-34 PROTECTION ZONE (ULTIMATE)

PROJECT NO. 0877
SHEET NUMBER 4 OF 8
DRAWING NUMBER

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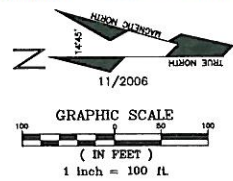
BUILDING TABLE											
118	GRAVEL PIT	NA	276	HANGAR	3655.6	330	HANGAR	3644.1	524	FBO	3633.3
167	GUN CLUB	NA	281	HANGAR	3653.2	338	HANGAR	3644.1	525	SRE BUILDING	3629.3
193	HANGAR (T.B.R.)	3625.3	288	HANGAR	3658.6	340	HANGAR	3647.6	333	HANGAR	333
195	HANGAR (T.B.R.)	3625.3	291	T-HANGARS	3650.7	342	HANGAR	3648.7	333	HANGAR	333
199	FUEL POINT		301	CRASH & SAFETY	3637.5	344	HANGAR		533	FORREST SERVICE	3620.5
237	HANGAR	3646.1	303	HANGAR/CAFE	3634.9	348	HANGAR	3648.7	533A	FORREST SERVICE	3620.9
239	HANGAR	3643.6	308	HANGAR	3640.8	350	HANGAR	3648.7	533B	FORREST SERVICE	3620.9
240	HANGAR	3644.1	315	HANGAR	3644.0	352	HANGAR	3649.5	533C	FORREST SERVICE	3620.6
243	HANGAR	3644.4	317	HANGAR	3640.0	354	HANGAR	3647.5			
245	HANGAR	3645.2	319	HANGAR	3637.7	358	HANGAR				
250	HANGAR	3648.7	325	HANGAR	3640.8	358	HANGAR	3650.7			
251	HANGAR	3644.2	329	HANGAR	3643.6	362	HANGAR				
252	HANGAR	3644.7	333	HANGAR	3641.4	364	HANGAR	3652.5			
253	HANGAR	3649.7	339	HANGAR	3644.1	370	HANGAR	3656.9			
256	HANGAR	3647.2	343	HANGAR	3644.1	440	HANGAR	3644.1			
259	HANGAR	3649.0	345	HANGAR	3644.1	442	HANGAR	3644.1			
260	HANGAR	3653.7	347	HANGAR	3644.1	446	HANGAR	3644.1			
266	HANGAR	3658.1	356	HANGAR	3648.2	448	HANGAR	3644.1			
268	HANGAR	3650.9	365	HANGAR	3645.8	452	FBO	3648.7			
269	HANGAR	3657.6	375	HANGAR	3656.9	456	HANGAR	3655.2			
272	HANGAR	3650.9	316	HANGAR	3640.5	508	FUEL POINT				
274	HANGAR	3651.8	322	HANGAR	3640.5	510	HANGAR	3633.4			
275	HANGAR	3656.8	326	HANGAR	3644.3	521	FUEL POINT				

NOTE: TBR = TO BE REMOVED

NOTE: TBR = TO BE REMOVED

OBSTRUCTION TABLE						
NO.	DESCRIPTION	ROOF EL. / TOP EL.	EXISTING PART 77 EL.	EXISTING PENETRATION (FT.)	ULT. PART 77 EL.	ULT. PENETRATION (FT.)
①	FENCE NORTH OF OFA	-	-	UNKNOWN	-	-

NOTE: OBSTRUCTION TABLE BASED ON EXISTING RUNWAY AS A VISUAL RUNWAY. NUMEROUS OBSTRUCTIONS IF EXISTING RUNWAY UPGRADED TO NPI.



LEGEND		EXISTING	FUTURE
PAVEMENT			
BUILDING			
BUILDING AFTER RW RELOCATION			
FENCE			
GRAVEL			
AIRPORT BOUNDARY			
ADJACENT PROPERTY			
OFA (OBJECT FREE AREA)			
OFZ (OBSTACLE FREE ZONE)			
RPZ (RUNWAY PROTECTION ZONE)			
RSA (RUNWAY SAFETY AREA)			
BRL (BUILDING RESTRICTION LINE)			
THROWING DITCH / CREEKS			
WETLANDS			
CONTROL POINT			
AIRPORT REFERENCE POINT			

VERIFY SCALE!
THESE PRINTS MAY BE
REDUCED. LINE INCH ON
MEASURES ONE INCH ON
ORIGINAL DRAWING

SCOTT T.
BEL
8123 PE
PROJECT 0877

11/06 KMD
1 SRE AND TAXIWAY

NO. DESCRIPTION DATE BY

ENGINEERS
SCIENTISTS
SURVEYORS
PLANNERS
SINCE 1945

MORRISON
MAIERLE, INC.

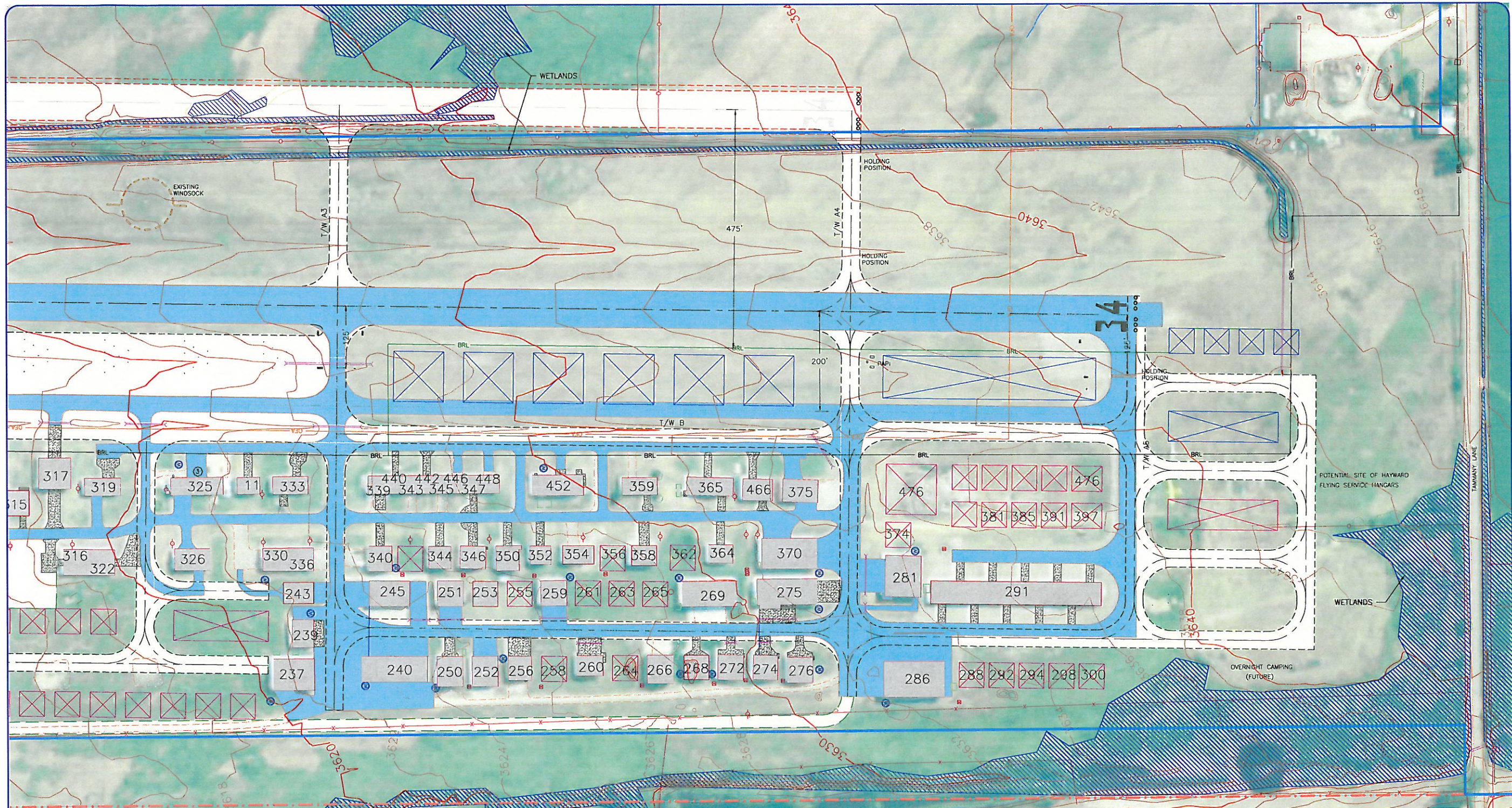
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APPR. BY: STB
DATE: 11-06
BY: O.A. REVIEW
DATE:

RAVALLI COUNTY AIRPORT
AIRPORT LAYOUT PLAN
MONTANA
HAMILTON
TERMINAL AREA

PROJECT NO.
0877
SHEET NUMBER
5 OF 8
DRAWING NUMBER
5

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BUILDING TABLE

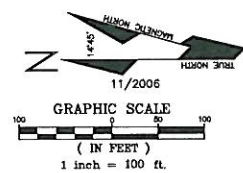
118 GRAVEL PIT	NA	276 HANGAR	3655.6	330 HANGAR	3644.1	524 FBO	3633.3
167 GUN CLUB	NA	281 HANGAR	3663.2	336 HANGAR	3644.1	525 SRE BUILDING	3629.3
183 HANGAR (T.B.R.)	3625.3	286 HANGAR	3658.6	340 HANGAR	3647.8	333 HANGAR	333
185 HANGAR (T.B.R.)	3625.3	291 T-HANGARS	3650.7	342 HANGAR		333 HANGAR	333
189 FUEL POINT		301 CRASH & SAFETY	3627.5	344 HANGAR	3648.7	533 FORREST SERVICE	3620.5
237 HANGAR	3646.1	303 HANGAR/CAFE	3634.8	346 HANGAR	3648.7	533A FORREST SERVICE	3608.9
238 HANGAR	3643.6	309 HANGAR	3640.8	350 HANGAR	3648.7	533B FORREST SERVICE	3608.9
240 HANGAR	3644.1	315 HANGAR	3644.0	352 HANGAR	3649.5	533C FORREST SERVICE	3608.6
243 HANGAR	3644.4	317 HANGAR	3640.0	354 HANGAR	3647.5		
245 HANGAR	3645.2	319 HANGAR	3637.7	356 HANGAR			
250 HANGAR	3648.7	325 HANGAR	3640.8	358 HANGAR	3650.7		
251 HANGAR	3644.2	329 HANGAR	3643.6	362 HANGAR			
252 HANGAR	3644.7	333 HANGAR	3641.4	364 HANGAR	2632.5		
253 HANGAR	3649.7	336 HANGAR	3644.1	370 HANGAR	3656.8		
254 HANGAR	3647.2	343 HANGAR	3644.1	440 HANGAR	3644.1		
259 HANGAR	3649.0	345 HANGAR	3644.1	442 HANGAR	3644.1		
260 HANGAR	3653.7	347 HANGAR	3644.1	446 HANGAR	3644.1		
266 HANGAR	3658.1	359 HANGAR	3648.2	448 HANGAR	3644.1		
268 HANGAR	3650.9	365 HANGAR	3654.8	452 FBO	3648.7		
269 HANGAR	3657.6	375 HANGAR	3656.8	466 HANGAR	3655.2		
272 HANGAR	3650.9	316 HANGAR	3640.5	508 FUEL POINT			
274 HANGAR	3651.6	322 HANGAR	3640.5	510 HANGAR	3633.4		
275 HANGAR	3659.6	326 HANGAR	3644.3	521 FUEL POINT			

NOTE: TBR = TO BE REMOVED

OBSTRUCTION TABLE

NO.	DESCRIPTION	ROOF EL. / TOP EL.	EXISTING PART 77 EL.	EXISTING PENETRATION (FT.)	ULT. PART 77 EL.	ULT. PENETRATION (FT.)
①	NONE	-	-	-	-	-

NOTE: OBSTRUCTION TABLE BASED ON EXISTING RUNWAY AS A VISUAL RUNWAY. NUMEROUS OBSTRUCTIONS IF EXISTING RUNWAY UPGRADED TO NPI.



LEGEND

	EXISTING	FUTURE
PAVEMENT		
BUILDING		
BUILDING AFTER RW RELOCATION		
FENCE		
GRAVEL		
AIRPORT BOUNDARY		
ADJACENT PROPERTY		
DFA (OBJECT TREE AREA)	DFA	DFA
OPZ (OBSTACLE PROTECTION ZONE)	OPZ	OPZ
RSA (RUNWAY SAFETY AREA)	RSA	RSA
BRL (BUILDING RESTRICTION LINE)	BRL	BRL
IRRIGATION DITCH / CREEKS		
WETLANDS		
CONTROL POINT	CP	CP
AIRPORT REFERENCE POINT		

RAVALLI COUNTY AIRPORT
AIRPORT LAYOUT PLAN

MONTANA

HAMILTON

PROJECT NO.
0877
SHEET NUMBER
6 OF 8
DRAWING NUMBER

6

ENGINEERS
SCIENTISTS
PLANNERS
SINCE 1945
**MORRISON
MAERLE, INC.**
An Engineering-Related Company
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Missoula, MT 59801
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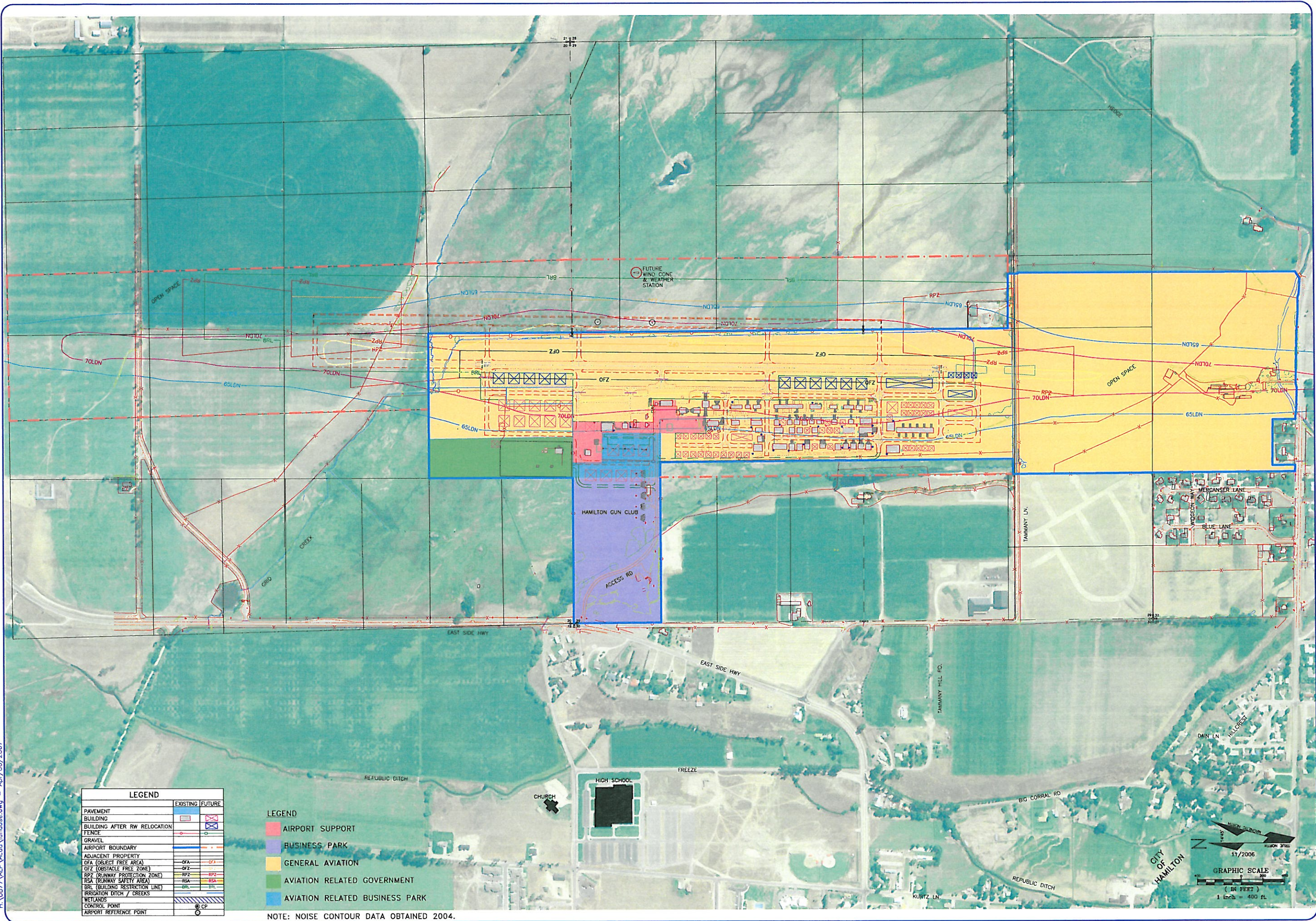
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CHK'D BY: TJE
APPR BY: STB
DATE: 11-06
BY: O.A. REVIEW
DATE:

REVISIONS	NO.	DESCRIPTION	DATE	BY
1	SRE AND TAXIWAY	11/06 KMD		



VERIFY SCALE!
THESE PRINTS MAY BE
REDUCED. LINE BELOW
MEASURES ONE INCH ON
ORIGINAL DRAWING
MODIFY SCALE
ACCORDINGLY

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LEGEND		
	EXISTING	FUTURE
PAVEMENT		
BUILDING		
BUILDING AFTER RW RELOCATION		
FENCE		
GRAVEL		
AIRPORT BOUNDARY		
ADJACENT PROPERTY		
OFA (OBJECT FREE AREA)		
OFZ (OBSTACLE FREE ZONE)		
RPZ (RUNWAY PROTECTION ZONE)		
RSA (RUNWAY SAFETY AREA)		
BRL (BUILDING RESTRICTION LINE)		
IRRIGATION DITCH / CREEKS		
WETLANDS		
CONTROL POINT		
AIRPORT REFERENCE POINT		

LEGEND	
	AIRPORT SUPPORT
	BUSINESS PARK
	GENERAL AVIATION
	AVIATION RELATED GOVERNMENT
	AVIATION RELATED BUSINESS PARK

NOTE: NOISE CONTOUR DATA OBTAINED 2004.

RAVALLI COUNTY AIRPORT
AIRPORT LAYOUT PLAN

MONTANA

HAMILTON

LAND USE

ENGINEERS
SCIENTISTS
SURVEYORS
PLANNERS
SINCE 1945

MORRISON
MAIERLE, INC.

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Phoenix, AZ 85001
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Fax: (602) 542-0003
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REVISIONS	
NO.	DESCRIPTION
1	SRE AND TAXIWAY
	DATE
	BY



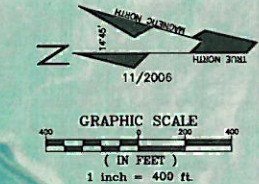
VERIFY SCALE!
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MEASURES ONE INCH ON
ORIGINAL DRAWING

PROJECT NO.	0877
SHEET NUMBER	7 OF 8
DRAWING NUMBER	7

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LEGEND	
	EXISTING FUTURE
PAVEMENT	
BUILDING	
BUILDING AFTER RW RELOCATION	
FENCE	
GRAVEL	
AIRPORT BOUNDARY	
ADJACENT PROPERTY	
OFA (OBJECT FREE AREA)	OFA
OFZ (OBSTACLE FREE ZONE)	OFZ
RPZ (RUNWAY PROTECTION ZONE)	RPZ
RSA (RUNWAY SAFETY AREA)	RSA
BRL (BUILDING RESTRICTION LINE)	BRL
IRRIGATION DITCH / CREEKS	
WETLANDS	
CONTROL POINT	CP
AIRPORT REFERENCE POINT	ARP

PARCEL	ACRES	LOCATION	PRESENT/PREVIOUS OWNER	RECORDING INFORMATION	RECORD DATE	INTEREST TYPE	FEDERAL AGREEMENT
1	115.96	Part of W 1/2 S 29, SW 1/4 S 20	RAVALLI CO./BITTERROOT STOCK FARM	98-274	5/10/48	FEE	PROJECT 9-24-005-701
1A	96.61	Part of W 1/2 S 29, SW 1/4 S 20	RAVALLI CO./BITTERROOT STOCK FARM	—	—	FEE	NONE
2	2.07	Part of the SW 1/4 S 20	RAVALLI CO./BITTERROOT STOCK FARM	98-280	6/8/48	FEE	PROJECT 9-24-005-701
3	36.90	Part of the W 1/2 S 29	RAVALLI CO./BITTERROOT STOCK FARM	105-60	4/24/51	FEE	NONE
3A	26.93	Part of the SW 1/4 S 29	RAVALLI CO./BITTERROOT STOCK FARM	—	—	FEE	PROPOSED E.D.A.
4	29.12	Part of the SW 1/4 S 29	RAVALLI CO./BITTERROOT STOCK FARM	136-701	10/22/74	FEE	NONE
6	6.2	Part of the SE 1/4 S20	BITTERROOT STOCK FARM	130-830	6/1/72	EASE	NONE
7	5.08	Part of the SE 1/4 S 29	ROBERT V. AND FERN IRENE LEONARDI	147-563	5/26/78	EASE	NONE
8	±22	Part of the SE 1/4 S 20	HAROLD & BRADLEY MILDENBERGER	—	—	FEE	TO BE ACQUIRED
9	±108	Part of the E 1/2 S 29, W 1/2 S 32	LEONARDI FARMS, INC.	—	—	FEE	TO BE ACQUIRED
10	±217	Part of the S 29 & S 20	RUSSELL	—	—	FEE	TO BE ACQUIRED
11	±10	Part of the SE 1/4 S 29	DAILY DITCHES	—	—	FEE	TO BE ACQUIRED
12	±2	Part of the NE 1/4 S 29	MILDENBERGER	—	—	EASE	TO BE ACQUIRED
13	±1	Part of the NW 1/4 S 20	MILDENBERGER	—	—	EASE	TO BE ACQUIRED



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REVISIONS	
NO	DESCRIPTION
1	SRE AND TAXIWAY
11/06 KMD	DATE

ENGINEERS
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SINCE 1945

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MAIERLE, INC.**
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BY: O.A. REVIEW	DATE:

RAVALLI COUNTY AIRPORT
AIRPORT LAYOUT PLAN
MONTANA
HAMILTON

PROJECT NO. 0877
SHEET NUMBER 8 OF 8
DRAWING NUMBER 8

EXHIBIT "A"
AIRPORT PROPERTY MAP

EXHIBIT "A"
LEGAL DESCRIPTION
RAVALLI COUNTY AIRPORT PROPERTY, EASEMENTS, LEASES
(CANNOT BE USED FOR THE TRANSFER OF PROPERTY)
SEPTEMBER, 2001

A TRACT OF LAND LOCATED IN SECTION 20 & 29, TOWNSHIP 6 NORTH, RANGE 5 EAST, PRINCIPAL MONTANA MERIDIAN; RAVALLI COUNTY, MONTANA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARING:
BEARING ARE GEODETIC, DERIVED FROM GPS OBSERVATIONS WITH SURVEY-GRADE RECEIVERS AND REFERENCED TO THE MERIDIAN AT AND 83 NORTH LATITUDE 48°14'51.4" AND WEST LONGITUDE 114°07'35.8".

BEGINNING AT THE SOUTHWEST CORNER OF SAID SECTION 29, TOWNSHIP 6 NORTH, RANGE 5 EAST AND THE TRUE POINT OF BEGINNING;

THENCE N 89°56'10" E ON AND ALONG THE WEST SECTION LINE OF SAID SECTION 29 FOR A DISTANCE OF 1986.94 FEET;
THENCE N 00°48'38" W FOR A DISTANCE OF 601.00 FEET;
THENCE S 89°29'28" E FOR A DISTANCE OF 150.09 FEET;
THENCE N 00°46'47" W FOR A DISTANCE OF 709.86 FEET;
THENCE N 89°16'14" E FOR A DISTANCE OF 99.58 FEET;
THENCE N 05°03'34" W FOR A DISTANCE OF 724.31 FEET;
THENCE S 89°15'15" E FOR A DISTANCE OF 450.00 FEET;
THENCE S 06°24'56" W FOR A DISTANCE OF 716.22 FEET;
THENCE N 89°16'14" E FOR A DISTANCE OF 97.15 FEET;
THENCE S 01°28'35" E FOR A DISTANCE OF 1,315.50 FEET;
THENCE S 00°24'44" E FOR A DISTANCE OF 2684.79 FEET;
THENCE S 00°24'44" E FOR A DISTANCE OF 1361.88 FEET;
THENCE S 89°40'21" W FOR A DISTANCE OF 214.10 FEET;
THENCE N 04°57'53" E FOR A DISTANCE OF 567.96 FEET;
THENCE N 89°15'15" W FOR A DISTANCE OF 450.00 FEET;
THENCE N 06°27'23" E FOR A DISTANCE OF 561.38 FEET;
THENCE S 89°40'21" W FOR A DISTANCE OF 248.31 FEET;
THENCE S 89°33'19" W FOR A DISTANCE OF 392.65 FEET;
THENCE N 00°24'52" W FOR A DISTANCE OF 323.24 FEET;
THENCE S 89°57'08" W FOR A DISTANCE OF 1,465.83 FEET;
THENCE N 00°19'22" W FOR A DISTANCE OF 800.32 FEET TO THE POINT OF BEGINNING;